PATENT
Attorney Docket No. 0050-0128

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
	)	
Kazuhiko Sugiyama et al.	)	Group Art Unit: 2616
	)	
Serial No.: 09/816,705	)	Examiner: D. Ryman
	)	
Filed: March 23, 2001	)	
	)	
For: INTERNET TELEPHONE SYSTEM ENSURING COMMUNICATION QUALITY AND PATH SETTING METHOD	)	

APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief – Patents
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

This Appeal Brief is submitted in response to the Final rejection mailed March 20, 2007 and in support of the Notice of Appeal filed June 20, 2007.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Juniper Networks, Inc.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals, interferences or judicial proceedings.

III. STATUS OF CLAIMS

Claims 1-9 and 13-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Doshi et al. (U.S. Patent No. 6,529,499; hereinafter Doshi). Claims 10-12 and 18-20 have been previously canceled without prejudice or disclaimer. Claims 1-9 and 13-17 are the subject of the present appeal.

IV. STATUS OF AMENDMENTS

No Amendment has been filed subsequent to the Final Office Action mailed March 20, 2007.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Each of the independent claims involved in this appeal is recited below, followed in parenthesis by examples of where support can be found in the specification and drawings for the claimed subject matter. In addition, each dependent claim argued separately below is also summarized in a similar manner.

Claim 1 is directed to an Internet telephone system for voice communication between a telephone subscribing to a first voice network and a telephone subscribing to a second voice network via a network using an Internet protocol. More particularly, the system includes a plurality of label switch routers configured to use a label switching technique (Fig. 3, LSRs 34-38; page 10, lines 12-15); a first media gateway (Fig. 3, 45) coupled to a first one of the plurality of label switch routers (Fig. 3, 34) and a first signaling transfer point (Fig. 3, 43) connected to

said first voice network (Fig. 3, 39; page 10, lines 15-22); a second media gateway (Fig. 3, 46) coupled to a second one of the plurality of label switch routers (Fig. 3, 36) and a second signaling transfer point (Fig. 3, 44) connected to said second voice network (Fig. 3, 40; page 10, lines 15-22); a path control unit configured to: store information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks (Fig. 3, 311; page 10, line 28 to page 11, line 5), store connection relationships between the first and second media gateways and the plurality of label switch routers (page 11, lines 5-7), store a maximum band settable between adjacent ones of the plurality of label switch routers (page 10, lines 26-27), and determine whether a first path having a first band larger than a band necessary for transferring a voice over Internet protocol (VoIP) packet between said first label switch router and said second label switch router exists (page 3, lines 4-7, page 12, lines 1-4), and when it is determined that the first path having the first band does not exist, set a new path for transferring the VoIP packet (page 3, lines 7-9, page 12, lines 4-6); and a packet control unit (Fig. 3, 312), coupled to said path control unit, configured to: instruct said first media gateway and said second media gateway to transfer VoIP packets via the first path or the new path (page 3, lines 9-12, page 16, lines 17-22, page 18, line 16 to page 19, line 2; Fig. 5, A3-A17).

Claim 2 recites: The Internet telephone system of claim 1, wherein the new path has a band that is equal to or more than a hundred times the first band (page 12, lines 1-15).

Claim 6 is directed to a method of setting a path to which a bandwidth is ensured on a network using an Internet protocol connected between a first voice network and a second voice network to execute voice communication between a telephone associated with the first voice network and a telephone associated with the second voice network. More particularly, the method includes storing information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information including telephone numbers of the telephones in the first and second voice networks (Fig. 3, 311; page 10, line 28 to page 11, line 5); storing connection relationships between the first and second media gateways and a plurality of label switch routers, the plurality of label switch routers including edge label switch routers (page 11, lines 5-7); determining whether a first label switching path having a residual band larger than a first band necessary for transferring a voice over Internet protocol (VoIP) packet between two edge label switch routers exists (page 3, lines 4-7, page 12, lines 1-4, page 14, lines 23-26); and setting a new label switching path when it is determined that the first label switching path does not exist (page 3, lines 7-9, page 14, line 27 to page 15, line 2).

Claim 8 is directed to a call control apparatus for setting a path on a network using an Internet protocol connected to a first voice network and a second voice network to execute voice communication between a telephone coupled to the first voice network and a telephone coupled to the second voice network. More particularly, the apparatus includes a path control unit (Fig. 3, 311) configured to: store information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information

including telephone numbers of the telephones in the first and second voice networks (page 10, line 28 to page 11, line 5), store connection relationships between the first and second media gateways and a plurality of label switch routers (page 11, lines 5-7), determine whether a first path having a residual band larger than a first band necessary for transferring a voice over Internet protocol (VoIP) packet between a first label switch router and a second label switch router exists (page 4, lines 1-4, page 12, lines 1-4, page 14, lines 16-26), and when it is determined that the first path does not exist, set a second path having a band that is equal to or more two times the first band (page 4, lines 4-7, page 12, lines 4-6, page 14, line 27 to page 15, line 2); and a packet control unit (Fig. 3, 312) configured to store a maximum band settable between adjacent ones of the plurality of label switch routers (page 10, lines 26-27), and control the first media gateway and the second media gateway connected to said first and second label switch routers, respectively, to transfer said VoIP packet via the first path or said second path (page 4, lines 7-10, page 12, line 26 to page 13, line 4).

Claim 13 is directed to a computer program product for implementing a call control apparatus for setting a path between a first voice network and a second voice network. More particularly, the computer program product includes instructions for storing information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks (Fig. 3, 311; page 10, line 28 to page 11, line 5); instructions for storing a maximum band settable between adjacent ones of a plurality of label switch routers (page 10, lines 26-27); instructions for determining whether a first path for

transferring a voice over Internet protocol (VoIP) packet between two of the plurality of label switch routers exists (page 4, lines 20-29, page 14, lines 16-26); instructions for setting, when it is determined that the first path does not exist, a new path (page 14, line 27 to page 15, line 2); and instructions for controlling a media gateway connected to at least a first one of said two label switch routers to transfer said VoIP packet via the first path or said new path (page 5, lines 3-5, page 14, line 16 to page 15, line 4).

Claim 15 is directed to a device. More particularly, the device includes a controller (Fig. 3, 311) configured to: store information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks (page 10, line 28 to page 11, line 5), store a maximum band settable between adjacent ones of a plurality of label switch routers (page 10, lines 26-27), receive a call request associated with establishing a voice connection between a first device and a second device via a network, the voice connection using voice over Internet protocol (VoIP) (page 11, lines 10-28), determine whether a first label switching path exists in the network between a first one of the plurality of label switch routers and second one of the plurality of label switch routers, the first and second label switch routers being involved in routing VoIP packets between the first device and second device (page 14, lines 16-26), and request, when the first label switching path does not exist, that the first label switch router establish a second label switching path to the second label switch router (page 14, line 27 to page 15, line 2).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-9 and 13-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Doshi.

VII. ARGUMENT

A. Rejection under 35 U.S.C. § 103 based on Doshi

1. Claims 1, 3-6, 8 and 13-17

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention always rests upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In rejecting a claim under 35 U.S.C. § 103, the Examiner must provide a factual basis to support the conclusion of obviousness. In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). Based upon the objective evidence of record, the Examiner is required to make the factual inquiries mandated by Graham v. John Deere Co., 86 S.Ct. 684, 383 U.S. 1, 148 USPQ 459 (1966). The Examiner is also required to explain how and why one having ordinary skill in the art would have been realistically motivated to modify an applied reference and/or combine applied references to arrive at the claimed invention. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988).

With these principles in mind, claim 1 recites that the path control unit is configured to store information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks. The Final Office Action states

that Doshi discloses that virtual provisioning server 230 stores information identifying connection relationships between telephones in the first and second networks and first and second media gateways and points to col. 5, lines 3-6 for support (Final Office Action – page 4).

Doshi at col. 5, lines 3-6 discloses that virtual provisioning server 230 determines a maximum number of calls that may be simultaneously supported. Doshi, however, does not disclose that virtual provisional server 230 stores information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, much less that the information includes telephone numbers of telephones in the first and second voice networks, as recited in claim 1.

In response to similar arguments made in the previous response, the Final Office Action admits that Doshi does not disclose this feature (Final Office Action – page 2). The Final Office Action, however, states that Doshi suggests this feature since Doshi "suggests combining the Virtual Provisioning Server and the Signaling Gateway into a single unit, where the single unit, i.e., the claimed 'path control unit,' will store information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, where the information includes telephone numbers of telephones in the first and second voice networks" (Final Office Action – page 2). Appellants respectfully disagree.

Doshi discloses the use of a virtual provisioning server 230 that communicates with signaling gateway 250 to provide network bandwidth capability information (Doshi – col. 3, lines 43-61). Appellants find no suggestion in Doshi regarding combining virtual provisioning server 230 and any of the signaling gateways 250 into a single unit, as alleged in the Final Office Action. Appellants further note that the Final Office Action points to no portion of Doshi as

providing support for the allegation regarding combining virtual provisioning server 230 and signaling gateway 250.

In addition, even if, for the sake of argument, the Examiner's allegation regarding combining the virtual provisioning server 230 and the signaling gateway 250 into a single unit was true, Appellants respectfully assert that the combined virtual provisioning server 230 and signaling gateway 250 would still not disclose the features recited in claim 1. That is, the combined unit would not store information identifying connection relationships between telephones in the first and second voice network and the first and second media gateways, much less that the information includes telephone numbers of telephones in the first and second voice networks, as required by claim 1.

For example, Appellants note that Doshi does not disclose that the signaling gateways 250 store connection relationships between telephones or store telephone numbers and the Examiner has not pointed to any portion of Doshi that supports such a contention. Appellants believe that synchronous transfer mode (STM) switches 210 of Doshi may store telephone numbers of various telephones since these STM switches are described as being originating and terminating public switched telephone network (PSTN) switches (Doshi – col. 2, lines 60-65). Doshi, however, does not disclose that signaling gateway 250 stores information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways, much less that the information includes telephone numbers of telephones in first and second voice networks, as recited in claim 1. Therefore, even if the Examiner's allegation regarding combining virtual provisioning server 230 and signaling

gateway 250 was true, the combined virtual provisioning server/signaling gateway would not store the information recited in claim 1.

Claim 1 also recites that when it is determined that the first path having the first band does not exist, the path control unit is configured to set a new path for transferring the VoIP packet. The Final Office Action at page 5 admits that Doshi does not disclose this feature, but states that Doshi discloses that virtual provisioning server 230 maintains a knowledge base of possible multiple paths between pairs of media gateways and that the packet control unit is instructed to admit a new call when there is capacity over any of the possible paths and points to col. 9, lines 54-56 for support (Final Office Action – pages 5-6).

Appellants note that Doshi mentions that the system of Doshi can be used in multi-protocol label switching (MPLS) networks (Doshi – col. 9, lines 54-56). Doshi also discloses that in an MPLS based network, virtual provisioning server 230 maintains a knowledge base of possible multiple paths between packet circuit gateway edge devices (Doshi – col. 9, lines 56-60). Doshi, however, discloses that virtual provisioning server 230 admits a new voice call request if capacity is available over any of the available paths, otherwise, the call request is rejected (Doshi – col. 9, lines 60-64).

Claim 1, in contrast, recites that the path control unit is configured to <u>set a new path</u> when the first path having the first band does not exist. This feature differs significantly from the disclosure of Doshi which merely has prestored information regarding various paths and checks for alternative paths when a voice call request is received. That is, Doshi does not disclose <u>setting a new path</u> when an existing path does not exist. In an MPLS based network, setting a

new path between label switch routers is significantly different than merely using an existing path or rejecting a call request when an existing path does not exist, as disclosed by Doshi.

In response to similar arguments made in the previous response, the Final Office Action states that the claim does not require "setting a new path that did not previously exist" and therefore, the alternate path in Doshi is a new path (Final Office Action – page 3). Appellants respectfully disagree.

While not reading features into claim 1, but reading claim 1 in light of Appellants' disclosure, Appellants respectfully submit that setting a new path, as recited in claim 1, would be understood by one of ordinary skill in the art to not be simply using an alternative path that has already been set. That is, the term "setting a new path" would be understood by one of ordinary skill in the art to entail more than merely using a preset alternative path. Therefore, Appellants respectfully submit that Doshi does not disclose or suggest that when it is determined that a first path having a first band does not exist, setting a new path for transferring the VoIP packet, as recited in claim 1.

For at least these reasons, Doshi does not disclose or suggest each of the features of claim 1. Accordingly, Appellants respectfully submit that the rejection of claim 1 is improper and reversal of the rejection of claims 1, 3-6, 8 and 13-17 is respectfully requested.

2. Claims 2, 7 and 9

Claim 2 recites that the new path has a band that is equal to or more than a hundred times the first band. The Final Office Action admits that Doshi does not disclose this feature, but states that Doshi discloses that each path can support multiple connections and points to col. 4, line 65

to col. 5, line 6 for support (Final Office Action – page 7). The Final Office Action further states that it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters of values of any system absent a showing of criticality and that the burden of showing criticality is on the applicant (Final Office Action – page 7). Appellants respectfully disagree.

Doshi, as discussed above, merely discloses that virtual provisioning server 230 determines the maximum number of voice calls that can be supported simultaneously between any pair of packet circuit gateways 215. Doshi does not disclose or suggest that a path control unit is configured to set a new path when a first path exists, much less that the new path has a band that is equal to or more than a hundred times the first band, as required by claim 2.

Appellants further submit that the bare assertion that the claimed feature is not critical to somehow shift the burden to Appellants is inappropriate. Appellants assert that the Examiner has provided no objective motivation for modifying Doshi to include the feature recited in claim 2.

For at least these reasons, Appellants respectfully submit that the rejection of claim 2 is improper. Accordingly, reversal of the rejection of claims 2, 7 and 9 is respectfully requested.

VIII. CONCLUSION

In view of the foregoing arguments, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejections of claims 1-9 and 13-17.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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IX. APPENDIX

1. An Internet telephone system for voice communication between a telephone subscribing to a first voice network and a telephone subscribing to a second voice network via a network using an Internet protocol, comprising:

a plurality of label switch routers configured to use a label switching technique;

a first media gateway coupled to a first one of the plurality of label switch routers and a first signaling transfer point connected to said first voice network;

a second media gateway coupled to a second one of the plurality of label switch routers and a second signaling transfer point connected to said second voice network;

a path control unit configured to:

store information identifying connection relationships between telephones in the first and second voice networks and the first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks,

store connection relationships between the first and second media gateways and the plurality of label switch routers,

store a maximum band settable between adjacent ones of the plurality of label switch routers, and

determine whether a first path having a first band larger than a band necessary for transferring a voice over Internet protocol (VoIP) packet between said first label switch router and said second label switch router exists, and

when it is determined that the first path having the first band does not exist, set a new path for transferring the VoIP packet; and

a packet control unit, coupled to said path control unit, configured to:

instruct said first media gateway and said second media gateway to transfer VoIP packets via the first path or the new path.

2. The Internet telephone system of claim 1, wherein the new path has a band that is equal to or more than a hundred times the first band.

3. The Internet telephone system of claim 1, further comprising:

a route control unit configured to control said plurality of label switch routers.

4. The Internet telephone system of claim 3, wherein said route control unit is provided to each label switch router.

5. The Internet telephone system of claim 3, wherein said route control unit is connected to all of the plurality of label switch routers.

6. A path setting method of setting a path to which a band is ensured on a network using an Internet protocol connected between a first voice network and a second voice network to execute voice communication between a telephone associated with the first voice network and a telephone associated with the second voice network, comprising:

storing information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information including telephone numbers of the telephones in the first and second voice networks;

storing connection relationships between the first and second media gateways and a plurality of label switch routers, the plurality of label switch routers including edge label switch routers;

determining whether a first label switching path having a residual band larger than a first band necessary for transferring a voice over Internet protocol (VoIP) packet between two edge label switch routers exists; and

setting a new label switching path when it is determined that the first label switching path does not exist.

7. The path setting method of claim 6, wherein said new label switching path has a band that is equal to or more than a hundred times the first band.

8. A call control apparatus for setting a path on a network using an Internet protocol connected to a first voice network and a second voice network to execute voice communication between a telephone coupled to said first voice network and a telephone coupled to said second voice network, comprising:

a path control unit configured to:

store information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information including telephone numbers of the telephones in the first and second voice networks,

store connection relationships between the first and second media gateways and a plurality of label switch routers,

determine whether a first path having a residual band larger than a first band necessary for transferring a voice over Internet protocol (VoIP) packet between a first label switch router and a second label switch router exists, and

when it is determined that the first path does not exist, set a second path having a band that is equal to or more than two times the first band; and

a packet control unit configured to:

store a maximum band settable between adjacent ones of the plurality of label switch routers, and

control the first media gateway and the second media gateway connected to said first and second label switch routers, respectively, to transfer said VoIP packet via the first path or said second path.

9. The call control apparatus of claim 8, wherein the second path set by said path control unit has a band of a hundred times said first band.

13. A computer program product for implementing a call control apparatus for setting a path between a first voice network and a second voice network, said computer program product comprising:

instructions for storing information identifying connection relationships between telephones in the first and second voice networks and first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks;

instructions for storing a maximum band settable between adjacent ones of a plurality of label switch routers;

instructions for determining whether a first path for transferring a voice over Internet protocol (VoIP) packet between two of the plurality of label switch routers exists;

instructions for setting, when it is determined that the first path does not exist, a new path; and

instructions for controlling a media gateway connected to at least a first one of said two label switch routers to transfer said VoIP packet via the first path or said new path.

14. The computer program product of claim 13, wherein the new path has a band that is at least one hundred times a band necessary for transferring the VoIP packet.

15. A device, comprising:

a controller configured to:

store information identifying connection relationships between telephones in first and second voice networks and first and second media gateways, the information including telephone numbers of telephones in the first and second voice networks,

store a maximum band settable between adjacent ones of a plurality of label switch routers,

receive a call request associated with establishing a voice connection between a first device and a second device via a network, the voice connection using voice over Internet protocol (VoIP),

determine whether a first label switching path exists in the network between a first one of the plurality of label switch routers and second one of the plurality of label switch routers, the first and second label switch routers being involved in routing VoIP packets between the first device and second device, and

request, when the first label switching path does not exist, that the first label switch router establish a second label switching path to the second label switch router.

16. The device of claim 15, wherein the controller is further configured to:

manage the use of labels associated with label switching in the network such that transfer of a VoIP packet from the first label switch router to the second label switch router through at least one other label switch router uses a single label.

17. The device of claim 16, wherein each of the first and second label switch routers comprises an edge router and the other label switch router comprises a core router.

X. EVIDENCE APPENDIX

None

XI. RELATED PROCEEDINGS APPENDIX

None